

SINGLE-USE PACKAGING FOR A LIQUID, SEMILIQUID, OR POWDER
SUBSTANCE

The invention relates to single-use packaging for a liquid, semiliquid, or powder substance. The invention 5 makes it easier in particular to apply a cosmetic, medical, or antiseptic composition, and more particularly any composition for application to the skin.

When traveling or engaging in sport, it can be desirable to have a cosmetic, medical, or antiseptic 10 substance available that is packaged for use on a single occasion, with packaging being discardable after use.

For example, pieces of toweling soaked in eau de 15 cologne or the like are known that are packaged between two sheets of flexible leakproof material. The user needs to extract the toweling from the leakproof pouch after opening it. The pouch therefore needs to be handled in order to be used. That concept is therefore not suitable for being transposed to packaging any kind of substance.

20 The invention relates to packaging enabling any kind of substance to be packaged, including a greasy cosmetic or a substance having a medical or an antiseptic effect that must not be touched by the fingers when it is deployed.

25 The invention provides single-use packaging for a liquid, semiliquid, or powder substance, the packaging comprising a protective cover comprising two separable leakproof pieces of material and an applicator enclosed in said protective cover, the packaging being 30 characterized in that said applicator is fixed to the inside face of one of said parts, in that it comprises a portion of fiber, sponge, or analogous structure, and in that said substance is distributed in said structure.

35 The first advantage that results from this novel structure is that once the protective cover has been opened it itself facilitates application, and there is no

risk of the user covering the fingers in the substance in question.

For example, the applicator may comprise a piece of flexible and porous material fixed via its periphery to 5 said inside face. This piece of porous material may typically be material of the non-woven type. To increase the quantity of substance that can be retained in the structure of the applicator, a piece of cotton wool or the like may be provided containing the substance and housed 10 between said piece of flexible and porous material and said inside face.

In a presently preferred embodiment, the above-mentioned cover is made of two flexible and leakproof parts, typically obtained from sheets of laminated-15 together plastics and metal materials. The two parts are united by a close-outline junction line surrounding the location of the applicator. Consequently, when the packaging is offered to the user, the applicator is fully enclosed inside the leaktight protective cover.

According to another advantageous characteristic, 20 when the above-defined packaging contains a dose of disinfectant or treatment substance for application to a wound or to a burn, the package is associated with an adhesive dressing. More precisely, a peel-off cover 25 containing said adhesive dressing is fixed via one of its faces to an outside face of the protective cover. Consequently, after applying the substance, the user does not need to search through other equipment to find an adhesive dressing for protecting a wound, since the 30 dressing is available on the packaging itself. In order to ensure that the dressing can be applied very easily, and possibly with one hand only, the outside face of said dressing is weakly secured to the inside face of the portion of the peel-off cover that is not fixed to the 35 protective cover. That type of dressing is known in itself and is described in US patent No. 5 511 689, but

the fact of making it available on the packaging makes it easier to use.

The invention appears more clearly in the light of the following description of a presently preferred 5 embodiment of single-use packaging applying the principle of the invention, given purely by way of example and made with reference to the accompanying drawings, in which:

- Figure 1 is a diagrammatic perspective view of packaging in accordance with the invention;
- 10 - Figure 2 is a view showing the underside of Figure 1;
- Figure 3 is a section view on III-III of Figure 2;
- Figure 4 is a view of the packaging once open, ready for use;
- 15 - Figure 5 shows an applicator being implemented on a wound; and
- Figures 6 to 8 show the use of an adhesive dressing.

The single-use packaging 11 as made available to the 20 user is externally in the form of a cover 12 referred to herein as a "protective cover" made up of two separable parts of leakproof material 13, 14. When used for applying a disinfectant substance or the like, said protective cover carries another cover 18 on one of its 25 faces, which other cover can be peeled off and retains an adhesive dressing 19. The features of this peel-off cover and of the dressing are described below. This is merely an option and does not mean that when the substance contained in the packaging is for treating a 30 wound or a burn it must necessarily subsequently be protected by said dressing.

The cover 12 contains an applicator 24 which is fixed to the inside face 25 of one of the two parts of leakproof material. The applicator includes a portion of 35 fiber, sponge, or similar structure and the treatment substance is distributed within said structure.

In the example shown, the applicator 24 comprises a piece of flexible and porous material 28 having its periphery fixed to the inside face 25. This piece 28 is taken from a sheet of non-woven type material presenting 5 all of the qualities needed for applying the substance. Preferably, the non-woven material is based on cotton, of the fluffless type. In the example shown, a piece of cotton wool or the like also containing the substance is housed between said piece of flexible and porous material 10 28 and said inside face 25.

In the embodiment described specifically, the applicator forms a pouch holding captive the piece of cotton wool or the like. The pouch comprises another piece of flexible material 26 having its periphery fixed 15 both to said inside face and to said piece of flexible and porous material 28. The two parts which in this case are identical in shape and size are united by a close- outline peripheral junction line 30. They hold the piece of cotton wool captive between them. The two parts 20 forming the walls of the pouch are united and the pouch is bonded to the inside face 25 of the part 13 by melting their materials by applying a hot tool having the shape of the junction line 30.

The two parts 13, 14 of flexible and leakproof 25 material are also bonded to each other by a close-outline junction line 35 surrounding the location of the pouch. In order to facilitate application of the substance, the surface area of each part 13, 14 of the protective cover is significantly greater than that of the applicator 24 30 which is secured substantially in the center of the area defined by the junction line 35. The junction line 35 thus surrounds an area that is significantly greater than that occupied by the applicator. The junction line 35 is a line of weak adhesive or heat-sealing enabling the two 35 parts 13 and 14 to be separated, i.e. they are suitable for peeling apart. Thus, certain laminates of metallized

plastics material are designed specifically to be peelable-apart in this way.

By way of example, the part 13 to which the applicator is fixed can be made from a laminate comprising a 12 micrometer (μm) thick layer of polyethylene, a layer of metallization, and another layer of polyethylene (PE) that is 80 μm thick, thus enabling the parts to be peeled apart. The other part constituting the protective cover can be made from another, similar laminate. At least one of the two surfaces pressed one against the other is treated so as to make peeling apart possible after the close-outline junction line 35 has been made by applying a hot tool of corresponding shape against the two parts of leakproof material, and after the applicator has been fixed to one of them.

As shown, a fraction of the length of the junction line 35 extends at a distance from the facing edges of said two parts of flexible material 13, 14, thereby defining two pull tabs 36, 37 enabling said two parts to be separated. After being included in the protective cover, the applicator 24 is subjected to sterilization treatment by gamma rays.

The substance permanently wets the piece of cotton wool and the piece of porous material 28 inside the protective cover. To apply the substance, it suffices to open the protective cover 12 on at least three of its sides. The open cover makes it easier to handle the applicator 24 and makes it easier to use the substance available in the structure of the applicator (see Figure 5).

The peel-off cover 18 containing the adhesive dressing 19 is fixed via one of its face on an outside face of the protective cover 12. The inside portion 39 of the peel-off cover 18 which is fixed to the outside surface of the protective cover presents resistance to being torn off than is considerably greater than the

force needed to open the peel-off cover. Consequently, the inside portion of the peel-off cover remains attached to said protective cover when the peel-off cover is opened to take hold of the dressing (see Figure 6).

5 However, the outside face of the dressing is weakly fixed (e.g. by moderate adhesive) to the inside face of the outside portion 40 of the peel-off cover which is not fixed to the protective cover. Consequently, when the peel-off cover is opened, the dressing 19 remains fixed
10 to the portion 40 which is being pulled. Once the adhesive portions have been separated, the dressing can be applied (Figure 7) by manipulating the detached portion of said peel-off cover, without any risk of touching the sterile zone. However, once applied to the
15 skin, the adhesive zones of the dressing stick to the skin sufficiently strongly (Figure 8) so that when the portion 40 of the peel-off cover is pulled away it becomes detached from the dressing. The sterilization treatment can be applied after the peel-off cover
20 containing the dressing has been fixed to said protective cover containing the pouch.